A

SUCCINCT TREATISE

ON MEDICAL REFORM

FOR IRELAND,

EMBRACING IMPROVEMENTS IN ETIOLOGY OR IN THE KNOWLEDGE OF THE RELATIVE AGENCY,

OF THE CONCURRING CAUSES OF ITS

EPIDEMIC AND PESTILENTIAL DISEASES,

WITH A VIEW TO PREVENTIVE MEASURES, AND

IMPROVEMENTS IN PATHOLOGY,

Or the application of the DISJECTA MEMBRA of the rival Systems of

FLUIDISM AND SOLIDISM,

TO FORM ONE MORE PERFECT THAN EITHER, WITH A VIEW TO

REMEDIAL MEASURES,

BY

WILLIAM STOKER, Esq. M. D.

HONORARY FELLOW OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND, AND OF THE LONDON MEDICO-BOTANICAL SOCIETY, MEMBER OF THE SURGICAL SOCIETY OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND, AND FORMERLY MEMBER OF THE EDINBURGH MEDICAL SOCIETY, OF THE ASSOCIATION OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS.

"When the mind shall be obliged to observe facts which cannot be reconciled with opinions, it will be evident that such opinions are ill founded, and they will be laid aside."—MORBID ANATOMY BY MATTHEW BAILLIE, M. D. &c. &c.

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"The political convulsions which distinguished the close of the Eighteenth "century, were accompanied with various movements, more pacific in their "character, and more permanent in their results."—EDINBURGH REVIEW, VOL. LX. ART. VII.

The above truth is prefixed, as it seems to me *(mutatis mutandis)* fully identified with the period of Medical History, contemplated in this Treatise.

W. S.

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ADVERTISEMENT.

The following pages are intended, as far as subsequent circumstances will admit, to supply the deficiencies I complained of at the conclusion of my Sketch of Epidemics, published in 1835, *and those which I now have to complain of in the printed Report of my evidence before the Poor-law commission, compared with my manuscript submitted, and, as I learned, approved of by Parliament.*

I am still without access to the annals of the Cork-street Hospital, nor am I possessed of the Notice, if any, afforded to my categories, relating to rural districts, with which I furnished, at their own desire, the Commissioners for Poor-laws for Ireland. Additional evidence, however, of the truth of the principles and validity of the practice I advocated on these occasions, can now be supplied, alike by the publications of my medical brethren throughout Great Britain and Ireland, and by the Reports of the Medical Commissioners, and to which I now mean to refer.

The deeply and generally important questions of Medical Reform and Poor-Laws, expected to engage the attention of Parliament, early in the approaching session, and the urgent need of those measures to meet the prevailing visitations of famine and disease, must excite the interest of every one not regardless of suffering humanity. These motives and the awful threatnings of popular distress which a very general failure of the harvest holds forth, have, in a very great degree impelled me at present, to the publication of the first part of this treatise and for reasons subsequently stated to postpone most of the second section.

TO THE

RIGHT HON. LORD VISCOUNT MORPETH,

&c. &c. &c.

My Lord,

The honor conferred on me, by the permission of dedicating this treatise to your Lordship, claims my most grateful acknowledgements, and encourages me to hope that the sanction of your Lordship's name, will recommend it to public notice, and assist in promoting the objects for which it was written. Your Lordship's high and influential station in the government of Ireland, would naturally, and fitly, point out your Lordship as the legitimate protector of that which is directed to the amelioration of the condition of the Irish poor; and to the prevention of those epidemic and pestilential diseases, consequent on that condition, and on the privations and destitution under which they always suffer, but more severely at particular and recurring periods.

Besides those public motives, my feelings, individually, are engaged by those kind manifestations, which, although hitherto unattended by any positive benefit, have not the less claims upon the gratitude of

My Lord, your Lordship's
very Faithful and
Obedient Servant,
WILLIAM STOKER, M.D.

MEDICAL REFORM.

INTRODUCTION

On entering under peculiar circumstances, probably for the last time, upon departments of physical inquiry, in which I have been engaged much the larger portion of a long life; apart from, and heedless, of professional cabal, party intrigue, and political hate by which, notwithstanding I have been severely injured, I beg to make a few prelimenary remarks to explain my objects, and to obviate some prejudices of my professional brethren, by some of whom my previous efforts have been unexpectedly, because I think, unjustly opposed. Whether those prejudices were the tints of *orange* or of *green*, they did me equal injustice, for I viewed the public interests through a more cool and sober medium than either, and relatively to objects which made neutrality a virtue.

An imperative sense of public duty, not self-sufficiency, first compelled me to undertake such tasks; and the same feeling subsequently dictated that I should not, without a struggle, abandon so important a position. Moreover the aid I soon received, and the quarters from whence it came, further confirmed the importance of that position, and my resolution to defend it.

I never proposed to form a new Medical code. To abolish tested improvements in the knowledge and treatment of Epidemics, (one of the subjects I am about to enter on,) is a proposition at variance with that which the exigencies of hospitals devised for the prevention and cure of epidemic fevers and pestilential diseases, first led me to promulgate, and afterwards to maintain. It would be equally so to detract from recent improvements in pathology, another subject which I intend touching upon.

While in the former case I insist on those benefits conferred by the father of rational medicine and his disciples in ancient times, and by Sydenham's philosophic history of epidemics in modern times, I hold that both are necessary to sound practice, and have maintained their rank in the intervals of theoretic revolution. These improvements, interwoven as they are with the habits of the best practitioners, were derived, on the one hand from just estimates of the relative urgency of exciting causes of epidemic diseases, such as famine or general destitution, compared with miasm arising from the bodies of the sick, or atmospheric distemperature; and, on the other hand, from discoveries of morbid changes and consequent

morbid actions in the living organs and in the vital fluid, as causes of the symptoms before, and of the appearances found after death. I do not expect that the practice of physic can be advanced in any other way: and the new lights, which anatomy and chemistry have thrown upon the science of medicine, cannot fail to bring it to that point of perfection, towards which I have ventured to be an humble pioneer, in order to smooth the advance of those who are to come after me.

Awakened attention to medical statistics, the application of microscopes of great additional power, discovering the origin of vital actions in the fluids, with interruptions of those actions as the true causes of disease, and the valuable additions made to morbid anatomy, promise to raise medicine and surgery from the class of conjectural arts, to their legitimate rank, where, susceptible of the advantages of induction from experience, their progress, like that of kindred sciences, will be progressive and constant; and their professors, no longer drawing in different ways injurious to the public, and to themselves, will attain that distinction which their quarrels and adverse practice have alone prevented.

I may here, as on similar occasions, observe the arts, or rather the sciences of Medicine and Surgery are so intimately connected, and mutually dependant, that it may be said the life blood of each flows into the body of the other;

"Si fratrem Pollux alterna morte redimet;"

And even where their distinctness seems most obvious, they can be considered but as different branches from the same root, which humanity planted to assuage the sufferings of mankind, I could not, of course, be supposed in contempt not more of my own 'order' than of the truth, to deny the obvious advantage of the division of labour, or the immense benefit which a science so complex and extensive as the cure of the infinite variety of bodily diseases, must receive from the distinctions in *practice* of the Surgeon and Physician; but he who is to become eminent as either, must well understand the principles of both, for however the practice may differ with its object, the principles are the same; just as in the simple and mixed sciences, we see the great assistance which astronomy has derived from the several labours of those who devoted their lives to the advancement of her component sciences; yet, before these several enquirers can attempt to advance their separate studies of trigonometry, or opticks, or mechanicks, each must begin at the root, the simple geometry, and learn the principles of all.

At no other period, perhaps, could such inquiries be more deeply and generally interesting, especially in this part of the united kingdom. The unprecedented growth of epidemic fevers in Ireland from the close of the last century, until they seem to have merged in the awful pestilence which has prevailed every where with increasing mortality since 1823, no less than the equally awful threat under the pressure of existing moral and physical causes, not only of its

continuance but increase, loudly call for speedy and rigorous investigation with a view to the separation of facts from mere opinions. Measures for relief, long and anxiously expected, moreover, are now said to be contemplated by the government, and Poor-Laws, as well as Medical Reform, are recommended, doubtfully by some, and confidently by others, with that view. In offering to contribute, as far as I am able, from my long experience, to promote the efficacy of these measures, and to shew why the good intentions of preceding legislators have failed, and how existing institutions may be improved, I propose to refer to what have been the relative effects of concurring causes, and prove that those measures which have been founded wholly on non-contagionism or ultra-contagionism on the one hand, or on exclusive fluidism and exclusive solidism on the other, have alike failed, chiefly because they are exclusive; too much importance having in the one case, been attached to some concurrent causes;—for example, contagion—and too little to others, such as famine, general destitution, and malaria. And the treatment of diseases, especially those of a medical nature, will, I think, be found unsuccesful, chiefly because, it has been influenced by doctrines based exclusively on *post mortem* appearances detected in the solids, with little regard to the morbid alterations, as demonstrable in the animal fluids and living solids in the course of diseases.

By the same process I hope to shew, on the one hand, that neither ultra-contagionism, nor non-contagionism can suffice *per se* for the treatment, either preventive or curative of Epidemics; and on the other, that neither the humoural pathology, nor that founded on post-mortem examination, alone, can suffice for the exigencies of practice; whilst sound systems may be formed from both, if, not aiming like the enthusiastic opponents in either case, at an exclusive principle for a proximate cause: things proved, being made the majority however opposed to opinions, and things not proved, however plausible, the minority in the proposition,

Such are my objects. My motives too, as detailed in my successive publications on the subject, since the close of the last century were always the same. The Etiology however founded on a comparison of concurring causes of Epidemics, and the Pathology I stated in the earliest, as well as the latest of my medical publications, to be demanded by the exigencies of practice, though violently and generally opposed at first, have in each successive year been more generally received: so that the assertions respecting either, which I then made; have been since confirmed by some of my most violent opponents, and what they once doubted, namely, the occasional absense of contagion in the spread of disease, and the mutual dependance of physiology and pathology in accounting for symptoms, are now denominated truisms, no longer admitting of discussion.

The two departments of inquiry, taken conjointly, relative to my objects and motives, will be treated of separately, in order, first, that the evidence I gave to the Poor-Law Commissioners of inquiry

for Ireland, should be further substantiated, with a view to the prevention and remedy of famine and pestilence, as well by referring to the omissions in the printed report of that evidence, as by shewing that the opinions which I advanced on that occasion were adopted by the Medical Commisioners, perhaps unconsciously as their own. Secondly, that the satements contained in a paper which I read the 18th of April, 1836, on the connection of physiology and patholoy at an open meeting of the King and Queen's College of Physicians, may be further insisted on and extended, by the aid of more recent information, and which I availed myself of in a paper I had intended that College.

SECTION I.

My leading object in the present tract, is, by my own experience subsequent to my former publications, as well as by the testimony of others, to strengthen the proofs already furnished of the utility of the principles and practice which I have uniformly recommended while tracing to their origin, with a view to check them, the formidable epidemic diseases which, with little or no intermission, have afflicted this country for an indeterminable period, and are still on the increase. The wretched state of the poor, I have always maintained to be the chief cause of the periodical visitations under which Ireland labours, but I never denied that contagion, lent its aid to the propagation of disease so excited. And I should incur great responsibility were I, at any time, to withhold the information which the professional practice of the greater portion of my life, enables me to afford: more especially, now, when parliamentary inquiry on the subject, in connexion with a system of Poor-laws, is still pending.

I have heretofore expressed my opinion that an eleemosynary system would be inadequate to a steady relief of the poor of Ireland, on account of the peculiar circumstances of the country; but doubt will attach even to any legislative enactments on the subject. For where are the supplies to come from? Absenteeism withdraws from our country, not only the benefits of the presence and influence of the majority of our Nobility, Gentry, and great land proprietors, but also the staple capital of Ireland, the rents from her soil. Her foreign commerce is very limited, and her home trade is such that in the very articles of her own consumption she is undersold. The consequence is, that the great mass of the people are starving, and small farmers find it almost impossible to pay their rents. The minor classes of traders find their existence, still more than their profits dependant on a prudence new to their practice; and professional men feel themselves under obligation to those who have made temperance a *fashionable* virtue.

Ingenuity has been most unworthily exercised, in order to prove that absenteeism is not injurious to a country, but the sophisms of the interested partisan cannot alleviate the wants of the

sufferer, nor should they impose on men endued with any portion of common sense. These remarks on absenteeism will not be found irrelevant when considered in connexion with the causes of epidemic disease. Investigation into these causes have, I am aware, made part of the examinations had before a committee of the house of Commons, but not, I think, so as to exhibit their true magnitude and actual proportions.

In order, more fully to shew the relation of absenteeism and other concurring causes, to the poverty and destitution of the labouring poor, and consequent generation and increase of disease, I have but to repeat, with little variation, what I have urged on those subjects in my pathological observations, (Part III.) published in 1830, viz :

In my reports from the Fever Hospital and House of Recovery, especially those in 1820.—21,—22,—23, and 28, I have adverted to this subject, when describing the effects which Absenteeism has mainly contributed to produce in the Irish Metropolis, and which are, I believe, nearly the same as may be observed in the other towns and cities of Ireland.*

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* Truly has it been said, "It is the state, the luxury, and fashions of the wealthy that give life to the artificers of elegance and taste ; is it their numerous train that sends the rapid shuttle through the loom ; and when they leave their country, they not only beggar their dependants, but the tribes that live by clothing them." The habitation of the miserable weaver becomes a spectacle of filth and confusion—his hearth cheerless—his only visitor the cold and wet which made its way through the ill-saved roof, his helpless infants famishing around him, and thus learning to regard all the energies of his manhood as useless, and his loom but lumber, he often sinks down in mental agony, and bodily exhaustion. In such a plight, it may easily be imagined, recourse is had to any and every means : every vice is resorted to which can either intoxicate affliction, or destroy sensibity. Thus it was that disease procured another agent, no less terrible than that from which it sprung. It was no unfrequent spectacle to see his whole family, a wretched group, coming down to the Hospital gate, or carried thither in a vehicle for that purpose, severely sick indeed, but bearing the symptoms of no other malady but that of cold and hunger ; nor was their condition less necessary to be attended to, than if they had laboured under a more regular form of disease.

Upon subjects not strictly medical, I speak neither willingly, nor perhaps scientifically. Philosophers declare, that abtentees do no injury to a country ; and those who are absentees, may pride themselves for their philosophy. But when speaking of those causes to which the fearful increase of disease in this city, for the last eighteen years, is to be referred ; I feel it my duty to risk my character as a scholar, while I state my experience, and declare, that from close observation of the course of things in this country, it is my firm conviction, that the miserable state of our *retail* trade, is the immediate cause, and that *it* has been the effect of the absenteeism, and the introduction heretofore of machines, *without capital*, which turned their powers against manual labour at home, without in the smallest degree, re-animating an expiring commerce. This conviction is here stated, because it is the result of experience ; that it will scarcely meet with approbation, is easy to foretell ; but certain it is, that absenteeism and machines, the loss of trade and poverty, vice and disease, have worked in frightful accordance.—*Vid* MY ANNUAL REPORT, FOR 1828.

Throughout the country the effects have been as deplorable. The agriculture is dwindling in the hands of persons whom necessity obliges to over-work their farms—the ground is divided and sub-divided—where a comfortable cottage once stood now appears a mouldering hut, or more frequently, a filthy hovel, scarcely fit to accommodate the swine that are domesticated within it. Surely, if the landlords of Ireland were to be found upon their estates, it is impossible to suppose, that their lands would have been parcelled out as they are at present—or that their tenantry would be so abused, or that those vast tracts of country which might be made such sources of wealth to their possessors, and would afford permanent employment, aud support, and independance to their cultivators, would be now lying bleak aud barren; never crossed except by an adventurous sportsman, or the wretched speculator in an illicit still.

I should be misunderstood, however, were it supposed that I meant to attribute to Absenteeism alone, the enormous evils that exist. Other causes which I am about to mention, have, no doubt, lent their destroying aid; but *it* has hatched the evil, and given sufferance to a spirit of insubordination, which I am certain, no system of Poor-Laws could satisfy, and which, I greatly fear, no system of Police will be found able to subdue—an opinion not vaguely expressed, but founded on the well-known fact, that men are never either happy or grateful when living on the bounty of others, however munificent; and this general principle I believe to admit of few exceptions, and to be so peculiarly strong in the native Irish, that to such as have not been already forced on the highway to beg or rob, it would be more tolerable to endure starvation than to be fed on alms.

Having mentioned Absenteeism as one great cause of the misery which at present prevails in Ireland, the next deserving notice is the evil of religious discord which has been plagueing this country for centuries, and been irritated, of late years, to madness. The consequences directly resulting from this evil are well known; but there are certain lesser effects of it which escape mention in general discussions, that may be interesting in the present discussion. One of these to which I formerly alluded, namely, the introduction of strangers into the various stations of lucrative employment has since ceased with the stations themselves. In the higher offices of society this, I believe, was frequently thought necessary, that the Government which appointed to them might not seem to take part with a faction. But among the lower ranks, the rage of party feeling has been most disastrous, especially amongst members of rival creeds, and it often happened that the business of the work-shop was postponed to the discussion of some desperate scheme, or the arrangement of some murderous combination, and the employers were as often forced to prefer any workmen to the natives. It must also be admitted, that (besides their not being accustomed, like others, to machinery,) the fierce tempers, frequent irregularities, and

midnight assemblies, which alternate idleness and agitation produced among the Irish workmen, must have seriously impaired the efficiency of their labour. The consequence was, as I have stated, and I have no doubt that if a census had been taken of the working Artizans in Ireland, it would appear in 1820 to 1830 inclusive, that the natives bear a very unequal proportion to the whole; and when this is the fact, it is little less than superlative effrontery in the writers and talkers of other nations, to swell with rage at the thought of the Irish poor partaking of their local advantages,and to follow them with curses and abuse. I would deem even this notice of such persons, perhaps more than they deserve, but that I am persuaded many of them are ill informed of the relative conditions or the working classes in each of the Sister Kingdoms.

The evils which I have just stated were certainly great, but, I long hoped, not incurable; for, as history and common sense show us that great changes cannot be instantaneous, yet since political distinctions have been happily removed by a measure both wise and just, its benefits must follow; but time must have given its softning shadows before the spirit of animosity can entirely disappear. Upon this subject it would be easier to fill a volume than a page;—I shall, however, only add, that in my humble judgment, to promote this object, or attempt to remedy the existing evils of party hatred, by any system of Poor-Laws or other precipitate means, would be found equally absurd in theory, and impossible in fact.

The other source of Irish wretchedness not to be compared in magnitude with, perhaps, either of those which I have already named, is yet so great and so intimately connected, that it requires to be noticed along with them—this is the Use of Machinery, *without capital or commerce*—wherever a machine can be be used in snch species of employment as Ireland affords.

Upon this subject I conceive that the most injurious error generally prevails. People point to England, and ask whether her machinery did not, in a great measure, produce, and does not altogether sustain her present greatness, and then sneer triumphantly at any objections to the use of the same power in this country; but the cases are altogether different—the foreign relations more than greater natural advantages of England, give to her a command over commerce, which nothing but her machinery could have enabled her to secure; it is manifest too, that the same mechanical force will continue necessary, while England maintains her commercial supremacy—or in other words—so long as the demand in the foreign market keeps pace with the power of her machinery; and late occurrences have fully proved that if ever the day comes, (and God grant that it be far off,) when such demand shall cease, or seriously diminish, the continuance of such mechanical operation would be ruinous to the operatives of England. Now, the circumstances in which I have supposed that England might have been placed, are precisely those in which Ireland has been long placed; for though the

foreign market is open to her, this is no advantage, since she has no capital wherewith to compete in it; her exports, with a few trifling exceptions, are of her raw produce, and these chiefly for the English and Scotch markets; it is right, also, to observe, that these exports afford the strongest proof of Irish misery, for the English Artisan and the Scotch Artisan can afford to send over to our home market, and purchase from the famishing and pennyless Irish the very articles which are necessary for home consumption.

At the commencement of my evidence given to the Poor-Law Commission, and of my Sketch of the Medical and Statistical History of Epidemic diseases in Ireland, I stated from Dr. Whitelaw's Census in 1798, the depopulation of the liberties of the city of Dublin during the succeeding six years; and from my annual Reports of the Fever Hospital and House of Recovery, the unprecedented growth of Epidemic Fever and Pestilential disease, since that time, as urgent arguments for investigation of the causes of these calamities; and in the succeeding parts of the same documents, I contributed to the success of that investigation. First, by shewing that the means previously, devised had failed, under the prejudice of pre-conceived opinions of pestilence, being mainly or wholly dependant on contagion; as well as that it would be dangerous for the inmates of Fever-Hospitals, although such institutions were expressly provided to check the growth of epidemic and pestilential diseases, to admit those labouring under the forms that mostly prevailed from 1831 to 1835 inclusive.

The importance of that investigation and the fallacy of such Hypotheses, having since become manifest, it would be nedless, perhaps on the present occasion, to do more than refer to my former statements And the general confirmation of them, since afforded by those who have written from actual observation on the same subject, as will appear by comparative references. My Medical and Statistical Sketch, already adverted to, states (page 9) that "the early and terrific effects of the destitution referred to in the introduction, appear in the synoptical tables of the Rev. James Whitelaw's essay on the Population of Dublin. In 1798 (he states) there were in Dublin.

	16,401 Houses, and	172,091 Inhabitants.
And in 1804, but	14,645 Houses, and but	167,899 ditto.
So that the return of 98 exceeded that of 1804, by	756 Houses, and	4,192 Inhabitants,

Now, if it is borne in the mind that it was in 1798, Dr. Jenner published his 'Enquiry into the Causes and Effects of the Variolæ Vaccinæ,' and that his recommendation of infection with that virus has been since very general adopted in Ireland, and its beneficial effects as widely extended, it follows necessarily from this singular depopulation of Dublin since, notwithstanding the most fatal of epidemics had been thus arrested, that other epidemics must have become more general and malignant."

The description of the progressive increase of febrile and pestilential disease in Dublin, I am about to offer, is taken for the most part from the annals of the Fever Hospital and House of Recovery Cork-Street, since it opened for the reception of patients in 1803. By the number of Patients admitted into that Institution each year, till 1817, when other fever hospitals were established, the rise or decline of disease may in some degree be calculated; and by the average mortality, then the only medical statstics in the Irish metropolis, its mildness or malignity may likewise in the same degree be measured.

The number admitted the first year was 415—of these 29 died—the average mortality being one in $14\frac{9}{72}$. In 1805, the hospital district, during the last eight months, of it including all the city on the south side of the Circular-road, the admissions were 1024, and the deaths 67,—average mortality, one in $15\frac{19}{76}$. Evidence of the agency of miasm arising from the bodies of the sick, and of malaria from adjacent marshes, was stated in the Medical Report of that year, founded, in the one case on the communication of fever through families, and in the other on the frequency of diurnal paroxysms and septenary crises. (See reports for the years 1804 and 5.) In 1806 the admissions from the south side of the Circular-road were 1264, and the deaths 103,—average mortality 1 in $12\frac{28}{103}$.

In 1807, though female servants and cases of scarlatina, which were not previously admissable, were then received, yet a diminuation of fever appears to have been effected in the district; but owing to a more malignant character of the epidemic at that time, the average mortality increased. The numbers admitted were 1100, deaths 92; average mortality 1 in $11\frac{88}{92}$. From the medical report of that year, it appears that scarlatina prevailed very generally amongst those who did not enjoy the immunity given by a previous attack, and that *Cynache Tonsillaris* very generally, and *Cynanche maligna* frequently was noticed amongst others who did. The apothecary and assistant were severely attacked, and it was then, for the first time, proposed to the managing committee, by the physicians, to have separate carriages and separate wards for the malignant cases. It however, should be stated, that no farther bad consequences arose from free admission of all forms of the epidemics into the wards (See Medical Report for the year 1807.*)

In 1808, the efficacy of the fever hospital became still more manifest, and both encouraged and enabled the physicians to recommend its extension over the whole city, within the Circular-road. The number of those admitted this year under that arrangement was 1071, and the number who died 94: average mortality, 1 in $11\frac{77}{94}$†.

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* See the Medical Report of the Cork-street Fever Hospital for the year 1807 By Wm. Stoker, M. D.

† See Medical Report for the year 808. By George Hagan, M. D.

In 1809, a further decline of fever enabled the managing committee to admit applicants of every grade of society in Dublin labouring under fever. It was also very remarkable, that as continued fever declined, that year, ague as much more prevailed, particularly in the spring months. The total number admitted in 1809, (of whom a large proportion laboured under intermittents), were 1051, and 83 died. Average mortality, 1 in $12\frac{6}{13}$.*

In 1810, the condition of the working classes being further deterioated, partly by the cheapness of ardent spirits, but chiefly by ruin of the middle classes from want of trade (see Medical report for that year), a remarkable revolutiou in the external character and nature of epidemics took place. Fevers became more typhoid or pestilential than had been before observed. The prominent symptoms were those of debility, marked by feebleness of the pulse and coldness of skin, such as had not been previously observed, and these were accompanied by corresponding alterations in the external characters of the blood, which, instead of being firmly coagulated and sizy on the surface, as happened before, at least, at the commencement of the disease, was seldom so at any stage of it. This was stated in my report of that year; and also that crises and septenary movements, still continued. It appears also in the report of that year, that even then the aggravation of symptoms led to the question of late years so vital—whether or not a new disease *sui generis*, had been generated here or imported from abroad? The number admitted greatly exceeded that from the same district in the preceeding year, viz: admitted 1774; died 154; average mortality, on in $11\frac{29}{77}$.†

In 1811, there was another decline of disease, seemingly to be connected with a corresponding improvement in the condition of the working classes and in trade, and partly, perhaps, with a check to disease given by the Cork street hospital. The numbers admitted, from the whole city were 1472, less by 302 than the preceeding year. The deaths amounted to 115, or 1 in $12\frac{91}{115}$, a smaller average mortality than the preceding year.

In 1812, the malignant type of the distempers which first appeared in 1810, again evidently, under a repetition of similar causes recommenced; and notwithstanding the reduction of the numbers admitted in the preceding year, increased to 2265, additional accommodation being provided at the Cork-street hospital to meet the pressure. There was not, however, an increased average of mortality, the deaths being 116 or 1 in $13\frac{97}{116}$ admissions.

In 1813 the numbers affected by distempers of nearly the same type as that of 1810, further increased; but whether owing to a more appropriate treatment in mixed cases and in distinct forms of typhoid and inflammatory disease, successfully adopted, chiefly

* See Medical Report for 1809. By Francis Barker, M. D.

† See Medical Report for the year 1810. By Richard Gamble, M. D.

according to the indications afforded by morbid actions, and co-existing alterations in the external characters of the blood, already intimated when treating on the pestilence of 1810, or to earlier application for admission, or to both these causes combined, the mortality in the Cork-street hospital was in 1813 less than in the preceding year. The number admitted was 2627, deaths 164,---average mortality 1 in $16\frac{3}{4}$.

In 1815, those diurnal movements, which previously gave to idiopathic fevers more or less of a remittent or intermittent form, became less distinguishable, and the distinctness of continued fever into symptomatic and idiopathic, and into inflammatory, and typhoid disease, became still more manifest, so that appropriate treatment for each could be better prescribed. On this account it was, I believe, chiefly, that notwithstanding the numbers admitted greatly exceeded those of any preceding years, yet the mortality in the hospital was greatly diminished. There were other circumstances, however, that year, which I am sure assisted these favourable results, such as opening a new building with much larger wards than those in the old (see my report for that year), and thus increase the number of beds from 80 to 180. Besides there was earlier application and increased confidence in the means employed. The number of patients admitted this year from the whole of the city within the Circular-road, amounted to 3,789, of whom 187 died, consequently the average mortality was only 1 in $20\frac{47}{187}$ admissions.*

The year 1816, though so constantly cold and rainy as to destroy the sown corn and rising crops to a degree that led to famine and pestilence throughout Ireland in the two succeeding years, was itself remarkably free from both. This plenty and healthfulness were observed also over the whole of Europe. The admissions into the Cork-street hospital from the same district as in the preceding year were less by 1086, viz: admitted 2703, deaths 173; average mortality one in $15\frac{103}{173}$ admissions. The increase of the average mortality from the preceding year, arose chiefly from the admission of patients labouring under phthissis and dropsy, into the wards which would otherwise be vacant, This frequency of phthsis, when epidemics do not prevail or are prevented, (e.g.) small pox by Vaccination, fully accords like the alternation of ague, and continued fever in the years 1808 and 9, with the opinion long received, that many congenite diseases, which do not arrive at their acme before puberty, have their fatal ravages anticipated by prevailing and malignant epidemics.†

The miseries of famine, which succeeded the failure or destruction of crops in 1816, were simultaneous and commensurate with the sudden increase of fever in 1817 and 1818. But the

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* See Medical Report for the year 1815. By G. Hagan, M.D.
† See Medical Report for 1816. By Wm. Stoker, M.D.

growth of disease was not nearly so rapid in the metropolis as in the other parts of Ireland, where famine was not so effectually opposed by a liberal supply of food, fuel and other necessaries of life. These coincidences must have afforded valuable instruction to those intrusted with devising preventive measures, had not the preconceived opinions of the *ultra*-contagionists fatally misled them. The same prejudice. however, still, unfortunately continued, notwithstanding that in each successive year since, other concurring and more evident causes occurred, such as heat and cold not alternating as before with summer and winter; the unprecedented privations of the working classes, and total loss of trade. The latter too became more and more manifest as the chief concurring causes; whilst the separate agency of contagion, according to any laws laid down by its own advocates, became more difficult to be identified. Certainly it never was proved wholly independent of other more evident causes.*

Famine being in the year 1817, for the reasons assigned, less productive of disease in Dublin than in the rest of Ireland, no additional fever hospitals were erected there. The admissions, therefore, into the primitive one, still afforded as suggested in some of my annual reports, a tolerably accurate scale, for measuring the increase of disease in this city. Moreover it likewise assisted in showing the relative mortality compared with 1816, the preceding year. These facts may be seen in the annexed table.

Years.	Admitted.	Died.	Average mortality.
1816	2703	173	1 in $15\frac{6}{17}\frac{3}{3}$
1817	3682	231	1 in $15\frac{2}{2}\frac{1}{3}\frac{7}{1}$

These results if duly examined and compared with the previous statements from the annals of the Cork-street hospital, are quite conclusive as to the superiority of supplying the poor with the necessaries of life, which was adopted in Dublin, during the first three quarters 1817. Surely such facts are well deserving of the attentive consideration of political Economists. It appears, moreover, that though this increase of disease in Dublin, in 1817, compared with other parts of the kingdom, or with 1816, which was a remarkably healthful year throughout Europe, was slight, yet compared with 1814, when the previously tardy advance of disease was opposed by the complex apparatus provided for checking contagion, there was an actual diminution, There was, therefore, a much greater number of patients in the Irish metropolis in 1815' when the most extensive apparatus ever provided against contagion, was in full opperation, than in 1817. But it was contemplated, in the latter years, only by the advocates of these measures, that a new and specific contagion had been imported, although the great superi-

* See Dr. Haygarth's Letter to Dr. Percival, in 1800. and Dr. Stokes' Essay on Contagion; 1829.

ority of the means employed in the first three-quarters of 1817 over the anti-contagious apparatus, and over the principles of its adoption, was rendered still more manifest. The very great importance of the illustration afforded by the relative increase of disease in Dublin, and in other parts of Ireland from 1815 to 1817, under opposite modes of practice will plead for dwelling so long on it. The subject demands much more space than can be given to it on this succinct treatise. A retrospect, however, of these events in 1817 and 18, may be found in the reports for 1820, 21, 23, and 28, and are epitomized in the following table, which includes the years from 1817 to 1828, inclusive.---(Appendix, Note A.)

Years.	*Admission.*	*Deaths*	*Mortality Average.*	*Observations on these Annual Admissions. and Deaths in the Cork-street Hospital.*
1817	3682	231	1 in $12\frac{217}{231}$	Famine stayed in the city by supply of food; raged in other parts of Ireland.
1818	7608	258	1 in $36\frac{126}{258}$	Many other fever hospitals established in Dublin, and received vast numbers. Actual mortality dreadful
1819	3873	224	1 in $17\frac{134}{224}$	These admissions into the Cork-st. hospital, and deaths, no longer measure the increase of disease in Dublin.
1820	2974	203	1 in $14\frac{134}{203}$	Contagion, famine, malaria, (vid. report 1820,21, manifest their irrelative agency.
1821	2973	246	1 in $12\frac{136}{246}$	Diseases more typhoid. See report or 1820,21.
1822	2307	137	1 in $16\frac{124}{137}$	Decline of disease generally over Ireland, as happened in 1816, before increase of 1817.
Total from 1803.	46361	2869	1 in $16\frac{657}{2869}$	Compare this mortality with that of the pest of the blood, in the successive years it prevailed.
1823	2668	241	1 in $11\frac{17}{241}$	Pest of the blood, supervened on influenza. See 2d part Pat. Obs.
1824	4599	327	1 in $12\frac{144}{237}$	All diseases, medical and surgical, affected by the pestilence. See Med. Rep.
1825	3878	381	1 in $10\frac{68}{381}$	Besides the peculiar characteristics of the blood, dropsy and spurious phthisis followed cases of pestilence.
Total 3 years	11145	949	1 in $11\frac{406}{949}$	The pest of the blood, epizootic and epidemic. Its symptoms being asphyxsia, sudden death, coldness, ecchymoses.
1826	10882	386	1 in $28\frac{1}{2}$	The mortality from the pestilence of 1823 was truly awful this year, tho' the average mortality in hospitals was very small, from the numbers in want of trade in famine, not disease, crowding them.
1827	6555	344	1 in $19\frac{38}{344}$	The same observations applicable as in 1826 and 27.
1828	2964	193	1 in $15\frac{49}{193}$	See report for 1828; decline of numbers, but mortality from the pest of 1823, sudden deaths, increased, phthisis and dropsy frequent.

The average mortality in 1817, became some what less than in the preceding year. In both however, the same principles and practice were pursued, in the same forms of disease as in 1810, when the first remarkable evidence of a tendency towards pestilence in the prevailing epidemic, was exhibited remarkably in the morbid appearances of the blood and by corresponding functional derangement. Then, too, in some cases, coagulated and sizy blood distinguished the increased action of inflammation; and in other cases broken down, dark coloured blood, as constantly denoted typhoid debility in whatever stage it was observed.* (See Medical Reports for 1820 and 21.)

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* With respect to the increase of disease, down to the year 1818, it is I believe, generally acknowledged, that it was the extension of the same form of Fever, to which the increased poverty and helplessness of the people, rendered them more liable. But to account for the extraordinary increase in 1818, and likewise in 1826 and 27, different opinions have been entertained, and different causes have been assigned. These differences shall now be detailed :—it being first premised, that as the extraordinary increase of disease in the years 1818 and 1826 were, by their manuer of appearance and departure identified, or at least, as the *differences respecting them* were the same, it will not be here necessary to treat them distinctly.

When disease had advanced to so dangerous a degree as to excite very general alarm and government found it necessary to institute inquiries, a letter was addressed by the Secretary of state and of the General Board of Health, to the physicians of the Hospital. It requested their opinions as to the *cause*, the manner in which it acted, and the most probable method of removing or counteracting it. As the answers returned to these questions were likely to direct in a considerable degree the measures about to be adopted by the board, it appeared that the duty thus required, was one of no ordinary responsiblity. It was therefore with exceeding regret that I found myself *differing* from my colleagues, while it was impossible to compromise my belief. *They* were of opinion, that contagion had " acquired *within a short period* more than ordinary force;" and that it was owing to this circumstance chiefly that so many were afflicted; while I believed that disease had extended almost entirely by the miserable condition of the people. The power of contagion was not indeed to be denied; but that the increase of sickness was in consequence of the increased force which contagion had gained within a short period, or that it owed its origin to contagion at all, was what my experieuce seemed to contradict. As the settlement of this difference is of paramount importance to subsequent inquiries, there shall be here laid before the reader those considerations, upon which I hope in this respect, at least, to justify the singularity of my opinions.

The system of prevention, over which disease had swept with irresistable violence has long been the subject of praise and admiration. In its formation no expense was thought too great, nor labous too severe; and in its completeness and exrent it might rival the speculations of fancy, and is certainly far superior to any other heretofore established. Hospitals of extraordinary accommodation were erected in various quarters of the city with a dispatch which might well call forth astonishment. The infected were immediately removed from the healthty—their habitations cleansed in the most complete manner, to prevent contagion and malaria. In the poorest parts, the streets were conveniently widened, and fountains giving a supply of excellent water were erected, for all the cleansing and culinary purposes of the inhabitants. But it will be remembered, that when this Fever Hospital was opened, it was *the only one* in Dublin; and

In 1818, famine fever, uniting with the pestilential disease, which was the comparatively slow growth of preceding years, the number of the sick in Dublin was frightfully increased. and though other large fever institutions were erected in the different quarters of Dublin so that 2000 beds were provided for sick poor in fever or famines till 7608 applicants were received into the Cork-street hospital alone. By far the largest proportion of these, however. were cases of famine rather than of pestilential fever, and demanded judicious administration of food and other necessaries at home, rather than medicines after admission into the hospital. This fact is important in its application, both with a view to medical and po-

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that so it continued for some years. During that time, it will be seen by a reference to the table, (page 9) that disease was more effectually restrained than at any subsequent period. Now, disease was as decided in its character, as contagious and as fatal *then*, as it appeared for several years afterwards; for by general acknowledgement, it was the same continued form;—and yet one Hospital, at that time of very limited accommodation, when compared with the present, and with a system of prevention comparitively crude, was able to repress the influence of contagion. It follows as a necessary consequence, that if contagion had continued to act alone, this slender apparatus had been all that we required. The reader will easily perceive that this conclusion has been drawn, not so much on account of its own importance, as for the information which it directly conveys. First, contagion was not the cause of the increase of disease; it was merely supervening, or accidental. Secondly, it is to that increasing poverty which caused such increasing exposure to the attack, and such increasing sensibility to the effect of contagion; that the increase of disease is properly to be attributed. But what is the fact? The advance of poverty and disease have been contemporaneous; and if this be kept in view, it is difficult to perceive how an ordinary understanding can refuse to assent to the justness of the argument. I say this in reference to the general increase of disease, without any regard to the peculiar years, 1818 and 1826. And the reader will not imagine, that any attempt has been hereby made to deny the existence or prevalence of contagion; for my argument goes to prove, that contagion did indeed prevail, *but not by its own power*—it was the tooth, but terrible only because in the jaw of the hydra.

Now, in the years 1818, 1826 (and also 1832,) it was believed by many, whose opinions are certainly well entitled to respect, that the extraordinary influx upon the current of disease, was owing not only to the appearance of *some new epidemic, but also the suddenly increased force of contagion.* The ground of their belief appears to be, that it was difficult to assign any other cause for the prodigious numbers of the sick—and that after dismission from Hospital, relapses were not unfrequent. But in matters of this nature, although it is very true, that extraordinary phenomena are to be attributed to extraordinary causes; yet, error will be most likely to prevail, if we attempt to explain rather by what might be, than what is—or, in other words, if we consult our ingenuity for a reason, rather than search through facts for the cause. The intellectual acuteness of a philosopher is one thing, and the patient drudgery of the practitioner is another—the one is the grander and more captivating; but the other is no less useful for its dulness. To the latter only, if indeed to either, can I venture to make any claim. Experience forms my theory—my chief argument is the display of facts. If then, the doctrine just alluded to, be tried by this test I believe that it will fail; since it would appear, that the facts on which it seems to rest will maintain an opinion not only different, but contrary.

It has been already seen, that the general increase of disease was produced, not by contagion, but by misery; and the amazing power of the agent must have been

litical economy. As a further illustration, in connection with it, it should be stated that under appropriated treatment of the different classes of cases of disease and misery, there were but 258 deaths among the 7608 received into the Cork-street Fever Hospital, or 1 in $30\frac{26}{68}$. The question of an imported contagion was also a subject of anxious discussion in 1817 and 18, as may be seen in the annual reports, The description of this period, the epidemics of the preceding nineteen years, equally applies to.

In the succeeding four years, 1818 to 22 inclusive (see the Reports from the Cork-street Hospital for that period), the relative effects of destitution, contagion, and in a less degree malaria were

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recognised in the Agency. When therefore, the question is asked, was it not probable that, in the years 1818 and 1826, misery was the cause of the unprecidented increase of sickness? Is it possible to answer in the negative? Certainly not—since its previous agency had proved its power unlimited: and if at a further step it is asked, does not the greatness of the number point to misery as the cause?—it can not be denied, that previous experience and probability are on the side of the affirmative. The very same may be said of the relapses. But if it should appear, that the character of the increase was of a very peculiar nature, and requiring a very peculiar treatment—and that these peculiarities do not only favour, but insist on the belief, that misery was the cause, can any doubt remain? That such is the fact, no other proof shall be given, than the particular statement of the facts themselves.

The result of a visit by two English Physicians, in the year 1817, seemed to me of so much importance, that in my Report for 1820—21, I stated at the foot of page 42, in order to show how few of these in the Hospital in that year, laboured under any of the real typhoid symptoms that generally characterise the indigenous Fever of Dublin. I may here also advert to a similar circumstance that occurred in 1826. That distinguished French Surgeon, Baron Larrey, being then in this city, paid a visit to ours and the other Fever Hospitals; and as I learned, he enquired especially after those bubos gangrenes, and other attendants or consequences of bad Typhus Fever, which, in his conception, were necessarily the leading objects of his solicitude. On his examination, however, at the bed-side, in our Fever Hospitals he often expressed his surprise, when on drawing back the covering, in a large proportion of the cases he perceieved not the symptoms of Typhus Fever, but those of starvation.

The peculiar symptoms of that sickness which during the years 1818 and 1826, formed the extraordiuary increase, consisted chiefly in a pallid and anxious countenance, a chilled or parched skin, keen sense of hunger, extreme dejection of spirits. Such were its symptoms. It must be unnecessary to observe, that these symptoms differ from those of positive disease, rather by diticiency than contrariety, as violet differs from yellow, or one from five. Besides this general distinction, however, there is one contrariety, viz—in the one case, there was a keen sense of hunger, in the other nausea. This deserves to be noticed more particularly, because it shewed not only a positive difference in the existing symptoms, but also a positive difference in the origin of the disorder: for according to general experience, wherever there has been contagion, there must be nausea.; but that where there is no nausea, there can scarcely be contagion.

The intermissions and proxysms which universally attend malaria, are too remarkable to allow even, for a moment, the supposition of their identity with the sickness in question.

Wherever, indeed, the sufferers from famine are exposed either to contagion or malaria, which have been so long rivals in their pernicious agency amongst our poor, then bodily and mental exhaustion giving a powerful predisposition to

distinguishable; but as appears in the preceding table, neither the average numbers admitted, nor the average mortality exceeded that of the seven preceding years.

The epidemic of 1823, (see my report from the fever hospital, and the first part of my Pathological Observations, both published that year), underwent a more extraordinary revolution than any I witnessed before or even since. Its new characters too, were diminished temperature, loss of vital power, with corresponding asphyxia, dark perechiæ and ecchymoses with jaundiced interstices, extremities blue, severe vomiting and mucous diarrohœa—the discharge varying from orange-coloured and green, to black, sometimes colourless, as

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be affected; symptoms succeeded, such as frequently characterise the fevers produced by either of these morbific causes. Very often, too, as may be supposed, under cirtumstances so favourable to the generation of contagion, it springs up spontaneously—and hence, pestilence frequently succeeds to famine. But I have generally found that where Fever arises from any other cause than privation of food, the effects can be as generally recognised in the characters of the disease; the typhoid form, in a greater or less degree, succeeding exposure to contagion; whilst, ague, in some of its types succeeds exposure to malaria.

The distinctness of the symptoms, arising from distinct causes of Fever, may be further illustrated by the fact, that the nurse-tenders of the Hospital, on receiving successive patients, and in contagious Fever from the same family are able, by describing the preceding cases, accurrately, to foretel a similar train of symptoms. Of the dissinct natures of Fever from contagion, and from malaria another illustration is afforded by the preceding pages. It may be perceived, that in those years when from contagion, Typhus Fever was most prevalent, agues were little or not at all known; whilst in other years, as in 1809 and 1828—in which the subsidence of continued fever was most remarkable—the frequency of intermittents was also most remarkable. I am the more desirous to dwell on these distinctions, from being persuaded that the great discrepancy of opinion which has for some time existed among the Physicians of Great Britain and Ireland, on the subject of contagion and malaria, has arisen chiefly from want of due attention to the effects of those agents, separately, and also from confounding them with those from other causes. To that confusion, probably, may be attributed the many pernicious mistakes which have taken place, both in devising means of prevention and in prescribing modes of treatment for febrile diseases. (See my Compara. View, Dublin, January, 1832.)

With respect to the treatment, it is to be observed, that, as there were different opinions on the nature of the sickness, so were there different modes of cure adopted. Those who looked upon it as a new epidemic, of course treated it accordingly. The success of their mode of prevention appeared to me not to be favorable to my opinions. The success of their curative treatment I do not pretend to know; but if there be any truth in rumour, it differed greatly from that which marked a different mode. In the former case, it was regarded as the mere sickness of misery, aud was immediately and most effectually relieved by nourishment, a dry bed and comfortable apartment. The average mortality which ensued, affords satisfactory evidence, as the reader may perceive by looking back to the column of deaths in this Treatise during the 1816—17—18—23—24—25—26—27—28, and comparing it with the column of admissions in these years. That the sickness arising from famine was distinct in its nature, from that arising from positive Fever, and pointed to distinct treatment, will be still more clearly seen from Tables given in the annual Reports, which will show the average length of time which patients remained in the relative years of famine, compared with other years.

in Lienteria. Fatal terminations and sudden, often preceded by metastastes. Paralysis, and dropsy, also frequently succeeded to, or attended on protracted cases. These aggravated characteristics were still more manifestly connected than in the epidemics of 1810, 17 and 18, with corresponding changes in the external characters of the blood, drawn in the course of disease, or found gorging the large bloodvessels after death, and corroborated the opinion I had previously expressed, of the blood being the chief seat of typhoid or adynamic, as well as of pestilential diseases. I had, however, never before witnessed, except in a few sporadic cases, nor seen described by the writers of the 18th century, characteristics so formidable, nor morbid changes in the blood cosresponding with them in the same degree. The malignity of the epidemic constitution of the air was otherwise very remarkable at this time, (see table), and as may be seen in the medical journals of that day, it interfered with the recovery of patients after surgical operations. both in this and the Sister Kingdoms. Besides slight punctures received while dissecting in the anatomical theatres, were often succeeded by sudden fatal attacks of typhus disease. That the malignant influence of the air was not only epidemic but epizootic was proved also by its symptoms, such as dark petechiæ in all parts of horses uncovered by hair (the tongue, nostrils, &c.) by glandulour tumours, both internally and externally on the same animals; by hepatization of the lungs and vascular congestion; dark and clotted blood, and corresponding changes in that drawn or effused in the course of disease. Numerous cases of this sort were presented to me by our eminent Veterinary Surgeon, Mr. Watts.† Through his kindness I witnessed the course of the dis-

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If, then, the peculiar character of the sickness was no more than hunger and exhaustion, and if its cure consisted in feeding and warmth, and comfortable lodging, to what cause does the nature of this redundancy of sickness—if the expression is allowable—itself point? Surely to misery, and misery alone.

† That the practice of physic may be even much more improved by comparative pathology thau the knowledge of the humau system by comparative anatomy can hardly be questioned by any one, knowing how boundless the field of inquiry is in the one case compared with the other. But independently of this, the greater simplicity of the organs of other animals, and of the diseases of these organs, than in man, greatly aid the physician in detecting (if there be any) of the traces of similar diseases after death. In the cases and dissections of the horses referred to in the text, the advantages of examining them very shortly after death, essentially promoted my leading objects, namely, to detect as far as possible the transaction of disease from the morbid fluids to the morbid solids. and *vice versa*. These symptoms of the epidemic, such as loss of pulse and warmth, coldness of breath, skin dark, and clotted blood, ecchymoses, sphacelus, abnormal motions and sounds of the heart, *soafflet de bruit*, in the thorax were all common to the human patient and the sick horse; so were hepatization of the lungs, infarction of the liver: ingorgoment of the heart, with dark coloured blood, and also of the large blood-vessels in every part of the body, with the

ease ; and the appearances found on dissection in a much shorter time after death than could have been attempted in the human subject, It was likewise in 1823 that I examined the temperature of the patients in the malignant typhus that then prevailed, and the results were, that even the *calor parum auctus*, of Cullen, was not then applicable to the prevailing distemper, as in many cases the thermometor stood much below 96°. So that fever and *Pyrexia* were then as unsuitable denominations for the existing epidemic in Ireland as *Cholera* and *Typhus* for that which afterwards committed such ravages in Europe in 8830, 31, 32, 33, 34 and 35. In the same year I was also fortunate in proving by experiments that the buffy coat on the blood, drawn either in inflammatory or dropsical complaints, did not depend, as previously supposed, on slow coagulation, or on the subsidence of red particles, but probably on functional derangement of the chemical affinities subtending to vital power which my experiments in 1807 indicated in the organs of sanguification. If compatible with the space that could be here given to it, it could be shown that great advantages both in theory and practice are derivable from the results of the foregoing observations, but reference on that subject to my Pathological Observations, published 1823, 28 and 30, must for the present suffice. (See 1st, 2nd, and 3rd part of my Pathological Observations.)

2668 patients were admitted into the Cork-street Hospital that year, and 241 died, the average mortality being 1 in $11\frac{217}{241}$. Now from the opening of the hospital to the conclusion of the preceding year, it was but 1 in $16\frac{124}{137}$,

The numbers admitted into the Cork-street Hospital, during the three succeeding years, viz., from 1823 to 1825 inclusive, (though then other large fever hospitals were established in every quarter of Dublin) were 11,145, of whom 945 died, showing average of 1 in $11\frac{4092}{943}$. Thus the virulence of the epidemic constitution of the air that year was exhibited,

The same symptoms continued with as fatal consequences in 1826 and 1827, as in the preceding three years, but owing to the admission of many not labouring under positive disease, the average mortality in the hospitals was less, viz.; 17,426 were admitted into the Cork-street hospital, of whom 726 died. To those who wit-

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same. Besides these appearances, common to all animals after death, of the then prevailing disease, there was copious effusion internally, of lymph, partly coagulable, but rarely any adhesive inflammation. In now republishing this note on my report for 1823, I may also observe, that in the spring of 1833 when a fatal influenza was both epidemic and epizootic in Great Britain and Ireland. Mr. George Watts, jun., kindly gave me, for the Surgical Society, a Report of cases and dissections of horses, both here and in England, in which, the symptoms, preternatural alterations of the blood, and *post mortem* appearances, corresponded minutely with what Mr. Watts, sen , and I had together witnessed in the epidemics of 1823 and 27.

nessed the fever of 1826 and 1827, it is hardly necessary to state, that coldness of the surface and of the breath, asphyxia, blue or purple colour of the extremities and frequent fatal terminations, accompanied by purging and vomiting were then also often to be met with. So much so, indeed, that Barron Larrey, who visited the Cork-street hospital at that time, has since stated, in his Treatise on Cholera, 1830, how much the disease he then saw in Ireland resembled malignant cholera:

The year 1828 was distinguished by diminution, both in the number of admissions and of deaths in the fever hospital; but this temporary decline cannot have resulted from a favourable change in the epidemic constitution of the air, for the cases still, in many instances, presented the same symptoms of malignancy, and the blood still exhibited the same pitchy and clotted appearance, whether drawn in the course of disease, or examined in the large vessels after death, as may be seen in the report for that year. Indeed, in all the cases in that report, both those who laboured under exanthematous and other fevers, tic doloreux, and dropsy, and the cases of some horses whose dissection is also given there, the same morbific influence of the prevailing condition of the atmosphere, was strikingly apparent.* To illustrate the nature of the fever of 1828 and the mode of treatment employed, I shall take the liberty of submitting the following abridgment of a few cases I noted at that time, and published in the Annual Report of that year.

John Baker, aged 64 of a broken down constitution, attacked on the 10th of December, 1828, was admitted into the hospital on the 13th of the same month. His countenance then was sunk, his eyes anxious and hollow, his voice almost inaudible; the skin was generally cold and clammy, and of a livid hue, particularly on the extremities; constant diarrhœa, general spasms, no coma, or dilirium. On getting some warm wine, which he drank with avidity, and warmth being applied to his limbs, the pulse became perceptible. Camphorated mixture, with the aromatic spirit of ammonia was then prescribed; and turpentine enemeta, with frictions of turpentine, were directed. Under these remedies, with the addition of turpentine in draughts, and a blister to the neck, he improved for some days, but on the morning of the 19th December, after walking to the fire without assistance, he suddenly expired. After death, the skin resumed its purple motly appearance' Dissection was not permitted by the managers of the hospital.

James Crotty, after eight days illness, was admitted on the 23rd December, 1828, aparently moribund: his head was drawn back, and the trachea protruded by spasm; temperature under the tongue, 90°. Nearly the same remedies were employed as in the last case, and with the same temporary benefit, but general spasms

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* See Report for the year 1828 by William Stoker, M. D., particularly from the 79th to 109th page, and from 143d to 161st inclusive

set in, and he soon afterwards expired. The purple colour of the body continued.

Mrs. Edwards, aged 38, was admitted 6th December, 1828, in the last month of gestation. Skin cold and clammy, extremities purple, eyes sunk, features collapsed, voice scarcely audible. Besides particular attention to the state of pregnancy, a similiar practice as in the preceding cases was adopted, but the powers of life gradually declined, and the motion of fœtus in utero, diminished until death of both took place on the 9th of the same month. On *post mortem* examination, besides evidence of much chronic disease in the cranial and thoracic vicera. the vessels and the surface of the brain were darkly tinged. The lungs were hepatized, and of the same purple appearance as the extremities. These latter results, of diseased action were most probably of no long standing, and seemed the immediate cause of death.*

The general and very decided check to the growth of disease, which has been alrcady stated to have occurred in 1828, I always attributed to the filip then given to our *sickly retail trade ;* and gladly quoted it as evidence of the buoyancy of this country, when relieved from a concurring cause of its aggravated calamities. Moreover discord at once the parent and child of such calamities, ceased during the transient period of prosperity. With respect to remedial measures, my subsequent experience of their efficacy further warranted me in recommending those I had employed in the aggravated form of the epidemic, in the year 1823, and which I believe, were in both cases, essentially the same.

In the year 1829, the same prostration of strength, diminution of animal heat, suspension of the vital powers, and other symptons of malignancy prevailed as in the year 1828. The average mortality for that year was nearly the same as in the preceding year, namely, 234 death and 2,839 recoveries or 1 in $21\frac{31}{234}$. In the report of that year too it may be perccived that several cases then detailed of typhus, and of dysentery, hepatitis, and rheumatism, were accompanied by some of the symptoms above alluded to. These cases seem to me to have suggested to the author of that report the term cholera, in a preceding page.†

Having repeatedly announced, from the begining of the year 1830, that the epidemic had, in a large proportion of cases both in hospital, and private practice, assumed characteristics of malignant diarrhœa, resembling those diseases described on the Continent, and in the East of Europe, and therefore demanding particular attention, I have drawn up the following table of admissions and deaths for each month during 1830, 31, 32 and for the first two months of 1833,

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* A particular description of the examination by Surgeon Trant, by whom I was assisted is given at the 153d page of my Report.

† See Medical Report from the Fever Hospital and House of Recovery Cork-street, for the year 1829. By John O'Brien, M. D., &c. &c.

with a view to that vital question. I have ever avowed the same opinion, and I feel it my bounden duty, however misconceived or misrepresented, still to maintain, that rigorous investigation on that subject is necessary for public security:—

	1830		1831		1832		1833	
Months.	Cases.	Deaths	Cases.	Deaths	Cases.	Deaths	Cases.	Deaths
January	355	42	454	38	37	31	362	21
February	287	23	393	31	384	28	265	16
March	309	20	332	30	386	34		
April	257	20	290	21	214	29		
May	250	17	278	28	280	18		
June	217	20	402	28	241	20		
July	220	23	244	14	181	8		
Agust	15	15	223	28	199	9		
September	206	22	297	21	167	14		
October	250	22	200	14	224	19		
November	292	17	300	36	294	12		
December	312	26	283	32	239	9		
Total each year.	3170	267	3708	307	3168	231		
Average.	1 in $11\frac{28}{277}$.		1 in $12\frac{8}{307}$.		1 in $13\frac{15}{231}$.			

From the above table it appears that the mortality of 1830 and 1831 was nearly the same as in that 1823; and the mortality of 1832, excepting in the first quarter, when it was 1 in $8\frac{4}{93}$, and in the other 3 was only in $14\frac{107}{138}$; but in the month of June when cholera was most

malignant, and therefore unfortunately was excluded, the mortality was only 1 to 22$\frac{5}{9}$. This relative diminuation in 1832, arose from the fact, that in the months of November and December, 1831, and January, February, March, and April, 1832, cases of the prevailing epidemic, not being yet acknowledged as such, were admitted indiscriminately (the mortality of those months was therefore increased); but during the remainder of the year 1832, when the epidemic mas most malignant, severe cases were excluded from the wards of the hospital, and sent to the establishments for the reception of cholera patients. The mortality during the latter months of 1832, was therefore less than in the corresponding months of any year since the Cork-street hospital according to the first resolution of the trustees was opened, " for the relief of the destitute poor aflicted with fever, and to check the progress of contagion, as well as acquire and diffuse medical knowledge." (See my comparative view of cholera morbus, January, 1832.)

Having thus adverted generally to this mischievous anomaly, I shall proceed *seriatim* with each of the three years in question. And first with respect to 1830, it may be seen in the 3rd part of my Pathology * then published, that besides adverting previously to the decisive evidence in favour of the pathology of the blood I had advocated; of Mr. Searle in the East, in his publication on epidemic cholera, and that of Dr. Steevens in the West Indies, in his observations on cholera and typhus, I also stated " that there was then another form of the pestilence, namely, *Cholera Morbus*, which was more fatal than the rest."

The following are abridgments from that publication of two cases in which the intelects were perfect, and both by their symptoms and *post mortem* appearances, tended to prove a direct connection then and since between asphyxia, coldness, blueness of the skin, sudden death, and morbid changes in the condition of the blood. In both cases, it may be perceived that the epidemic supervened on other diseases, which predisposed to the attack.

John Martin, a butcher, aged 42, was admitted 24th January, 1830, having laboured for eight days under symptoms of Pneumonia, which had been relieved by copious bleedings, leeches, blisters, &c. The blood first drawn, I learned was neither firmly coagulated, nor much buffed, but that the last was pitch-coloured and clotted. At the time of his admission no pulse could be felt even in the Iliac and Carotid arteries, and but an indistinct fluttering at the heart itself. The skin was icy cold, moist and livid; and the extremities, nose, lips and tongue were quite purple, as were also those parts to which blisters had been applied. He walked up stairs without

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* Pathological Observations, part 3d, 1830. By William Stoker, M. D. page 11 and 101 At the 109th page the above case of Martin is fully detailed under the head of "Pnenmonia Typhoidea.

help, and his mental faculties were complete to the last moment. Upon stethoscopising his thorax, that peculiar *souflet de bruit* which, in the cases of horses in 1321, already referred to, indicated hepitization of the lungs, was distinctly audible. Warmth and cordials were vigorously employed, but general spasms set in, and death followed in twelve hours from admission. On inspecting the body next day, it was generally purple, as was usual at that time, not only in the Cork-street, but in the Edinburgh hospitals. according to Dr. Allison and Graham's lectures, which I at that time quoted in support of my Pathology of the prevailing epidemic.

Second case.—Mr. T. W., aged 20. This gentleman had long laboured under caries of the dorsal vertebræ, together with pectoral affections, which had become very urgent in February 1830, accompanied with hœmorrhagic fever and dropsy. He came to town for medical advice, and by the antiphlogistic regimen and small bleedings was relieved, the blood being buffed, and for some days his strength and appetite continued to improve. Unfortunately, however, he was indulged unknown to me, by his attendants with too much food. and the affection of the chest became suddenly alarming. Bleeding and blistering were again resorted to, but not with so good an effect as at first. The blood drawn became a dark-coloured clot, the lips, tongue, and extremities, purple; the countenance livid; the voice failed; the pulse became suddenly feeble, and entirely ceased six hours before death, which took place a fortnight after his arrival in Dublin, and about twelve hours after his relapse.* On dissection the face, neck, and chest were of a livid hue, the tongue, lips, and interior of the mouth quite purple; hypertrophy of the heart, without disease of the valves; the large vessels were filled with dark blood; numerous tubercles in the upper portion of the right lung; the whole of the left lung was emphysematous, and adherent at its inferior margin by a fistulous communication with the 7th and 8th dorsal vertebræ, both of which were in a state of caries. The abdominal viscera were sound except the pancreas, which was enlarged and tuberculated,

In addition to these specimens of the epidemic of 1830, I can also refer for a more complete description of it to the 3rd part of my Pathological Observations, and to Dr. Grattan's Report of the Fever Hospital and House of Recovery, Cork-street, both published that year. In the former of those publications I recommended the root of dandelion, prepared as coffee, both as a preventive, and a

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* It has been objected by those opposed to the investigation I sought that such cases as those in the text are not thsse of *Cholera Morbus*. But I never said they were; I am now sure, however, comparing them with the cases which those objectors have pnblished as examples of the malignant epidemic of 1832,3, 4, that those of 1830 were essentially the same.

† Pathological Observations, part 3, on inflammatory, typhoid, and symptomatic diseases, &c. Dublin, 1830.

remedy in the severe forms of cholera morbus, and in obstinate diarrhœa, which then presented themsesves in hospital and private practice, and also preparations of achillœa milefolium or milfoil in those hydropic and rheumatic affections with which they frequently alternated. Very extensive trial of these vegetable substances, both as substitutes for more costly, and sometimes less safe articles of the *Materia Medica*, as well as favourable reports subsequently by some of my medical brethren, led to my first recommendation of them. I repeated it from finding them well suited for preventing and curing diseases more general amongst the Irish poor than those of other countries, (e. g.) epidemic cholera, and diarrhœa, and also for other diseases, which I observed frequently to alternate, since they have become more pestilential; I mean dropsy, spurious phthisis, and rheumatic pemphigus. This peculiarity of the disease of the poor of Ireland (as will appear more manifest under the subject of statistics) arises, I believe, chiefly from scarcity and insufficiency of food, particularly from the unwholesomeness of the potato, the staple food of the peasantry, when that article, as annually happens, is in a state either of decay or immaturity. An antidote, therefore, to such a national calamity, which might, at the same time be an agreeable substitute for ardent spirits, itself, a very general exciting cause of such diseases, must be deemed a *desideratum* of great moment in medical as well as in political economy. In Dr. Grattan's report of 1830, it is stated that it appears to him that the forms of epidemic which then presented themselves "passed by such imperceptible gradations into each other, as to be considered but varieties of the same disease."*

For a fuller description of the epidemic of 1831 than would be compatible with the space that remains, I must refer to the medical report from the Cork-street fever hospital for that year, and to my Comparative view of Cholera Morbus, published at the close of it. In the former of these publications, the epidemic of 1831 is thus described: "Its characteristic symptoms are great depression of spirits, irregular small and sometimes intermitting pulse, *tongue seldom dry*, but loaded with a viscid mucus, bowels torpid, *alvine evacuations, abounding with diseased fœtid mucus, and deficient in bile, brain seldom engaged.*"† The following specimens are extracted from my Comparative View. (See Appendix, Note B.)

December 8th, 1831. Deborah Deane, ill six days of severe cholera, which commenced with painful and violent spasms, in the trunk and lower extremeties, with vomiting and purging of turbid serous gruel-like fluid, and attended with extreme debility. The surface every where cold, features shrunk. Her symptoms were quickly subdued, chiefly by a mixture with compound spirit

* Report of the Cork street Hospital for 1830. By R. Grattan, M. D.

† See Medical Report of the Fever Hospital and House of Recovery, Cork-street. By P. Harkan, M. D.

of ammonia and camphor, and on the 9th December, she was convalescent.

December 13th, 1831.—Charles Kelly. aged 70, ill seven days, of cholera, which commenced with violent pains in his stomach, and spasms in his legs, accompanied with vomiting and purging of gruel-like fluid, and extreme prostration of strength; his face and hands shrunk and blue; skin cold and clammy; no pulse at the wrist; voice scarcely articulate; lower extremities dark blue; spasms and a painful sense of stricture over the belly and chest. By the aid of frictions, warmth, and camphorated mixture with ammonia, which were remarkably successful in this case in producing reaction within its proper bounds, he was considerably improved. On the next day, inflammation of the lungs set in, which required bleeding, and the blood was slightly buffed, an event which often takes place after crises in fever, though it had not previously. His recovery from this time was progressive, and he was dismissed from the convalescent wards a few days afterwards.* It was chiefly with a view to such cases as this that I was led to recommend a more ready admission to the hospital than in ordinary times, and no part of the cholera regulations, afterwards published at the suggestion of Drs. Russell and Barry, appeared to me more likely to save life than those which enjoined ready admission of those who sought it, and the conveyance of patients in an horrizontal posture. As may be seen I urgently recommended such regulations, in the report of 1823.

The next table, taken from the journals I kept during my bimestral attendance, ending 4th February, 1832, includes those two months which I first witnessed sporadic cases of epidemic cholera, approaching, on the one hand to the distemper of 1823, and on the other to the aggravated form it afterwards assumed in 1832, 33, and 34:---

No. in Cholera.		Died.		Typhus & Synocha.		Died		Inflammatory Fever		Died.		Scarlatina.	
Male.	Female	M.	F.	Male	Female	M.	F.	Male	Female	M.	F.	M.	F.
13	25	6	12	14	25	1	1	10	54	0	0	2	5
Delirium tremens		Died.		Phthisis.		Died.		Rheumatism.		Died		s.pock after vaccination	
Male	Female	M.	F.	Male	Female	M.	F.	Male	Female.	M.		M.	F.
3	2	1	1	3	23	1	9	10	54	1		1	4

Besides those cases enumerated in the foregoing table, there were some nondescript or simulated, making the whole number who passed under my care during those two months, 60 males, and 204 females, of whom 8 males and 16 females remained, some convalescent and others still labouring under acute or chronic complaints, one only, of the latter, a female had symptoms of cholera. The average

* See my Comparative View of Cholera Morbus. Published January 30, 1832.

mortality was 1 to $10\frac{5}{8}$. And it may be observed here that this as well as the general mortality in the hospital at that time, far exceeded that of the total at the close of 1830, which was scarcely 1 in 18. This difference itself indicated clearly an unusual severity of the epidemic; but the following report of some of the fatal cases in those two months, further shows what that epidemic truly was;---

December 3, 1831, Anne Keogh, aged 20, some time in hospital states. that her illness commenced seven weeks before with purging and vomiting, cramps in her bowels and calves of her legs. Although now somewhat relieved by chalk mixture, prescribed on her admission, yet is still distressed by diarrhœa; alvine evacuations frequent and thin like rice gruel, skin cold, voice and pulse feeble, countenance shrunk. Under the use of various remedies this patient continued for several days alternately better and worse, but at length was sent to the convalescent wards. There, in a few days she suddenly relapsed and died five hours afterwards, in the most malignant form of cholera morbus. The body and extremities having become purple some time before death.*

January 1st, 1832.- -Brian Brady, aged 50, had been attacked six days before with vomiting, purging, and cramps in the belly and legs; on the 22nd December he was admitted, and gradually recovered. But on the 7th January in the course of the morning he suddenly relapsed, with purging and vomiting of gruel-like fluid, symptoms which ceased in the afternoon. The skin was at that time cold, moist and blue, his breath was cold, eyes hollow, and features contracted; no pulse perceptible; spasmodic pains in his belly and legs; no urine passed for eight hours, nor was there aparently any secreted, as the bladder was empty. No interruption of the mental faculties. Notwithstanding the employment of cordials, friction and warmth, he died at six o'clock the same evening, about seven hours from the commencement of his last attack. On the succeeding day the body was rather less purple, and had the appearance of being dead some days, as happend in some cases. This, too, as is well known, was constantly observed in fatal cases of cholera, after that disease had been officially announced in Dublin.†

January 7th, 1832.—Patrick Dargan, an habitual drunkard, was admitted. He had laboured for seven days under cramps in his belly and legs, attended with great prostration of strength. At the time of admission, however, these symptoms had abated, and he was principally affected with stricture and pain of his chest, especially in the region of the heart. His appetite was keen, pulse full

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* This and five other cases who relapsed in the convalescent ward at the same period are detailed from the 16th to the 22d page of my Comparative View already adverted to in the text.

† In the manuscript accompanying the report of the months of December, 1331, and January, 1832, six other fatal cases of Cholera and Fever in a severe form were detailed.

and strong, and skin warm. Under the employment of suitable remedies, particularly venesection and aperients, and a mixture with ammonia he gradually improved; but on the 12th, at 9 a.m. he was suddenly attacked with mucus purging, and at 11 a. m. with pain and spasm through his whole body, with constant writhing of his limbs, skin being cold, shrunk and livid, hands and lower extremities remarkably so, and partially occupied with extensive echymoses. The eyes shortly before prominent, were then hollow, and his countenance pale, collapsed, and anxious; no pulse could be felt at the wrists even after warm drinks and warmth had been employed. These symptoms I have been more particular in stating, as this was one of those cases I wished to be examined before and after death, and compared with those just then reported from England and the Continent; but my colleagues as well as the Boards of Health and the Managing Committee were opposed to it. My proposition was therefore rejected and the investigation, with a view to public safety has been since denied. Although very active treatment was adopted in Dargan's case (as ordered in full consultation), death took place seven hours from the period of the relapse. About half an hour after death, Dr. William Stokes inspected the body along with me, and the remarkable circumstances then to be observed were constriction of the abdominal muscles, livid hue of the skin and echymoses on the elbows and lower extremities. From such appearances, as well as the report of the nurse, and the sudden death, Dr. Stokes expressed his opinion, and afterwards promptly repeated it in a letter to me, that the case resembled, and he would pronounce it malignant cholera, if he had not on other occasions witnessed as great prostration of strength and as sudden dissolution follow perforation of the intestines. He also regretted with me that the regulations adopted by the managing committee of the hospital opposed my urgent request of *post mortem* examination. And to decide the nature of this interesting and important case--- I felt, to be of vital importance to the public at that time.

The following table of admissions and deaths, constructed from the medical and annual reports of the managing committee of the Cork-street Fever hospital, being necessary to bring this sketch to the termination of 1834, and in willing compliance with a request of the able chairman of the Parliamentary Committee of Enquiry on Medical Education, I add it. Besides, it affords valuable evidence on the vitally important and still unsettled question, whether the epidemic constitution which has so repeatedly produced such dreadful effects in Great Britain and Ireland, since 1832, was then the result of a newly imported contagion *sui generis*, and productive of disease, requiring distinct and separate modes of prevention and cure? or was it that of atmospherical distemperature aggravating disease to which it had previously approximated,

and therefore, requiring no more than active employment of remedies previously in use. ?

Table of admissions, deaths and average mortality, annually, in the Fever Hospital and House of recovery from 1841 *to* 1834½ *inclusive.*

Years.	Admitted.	Died.	Average Mortality.
1831	3602	307	1 in $11\frac{225}{703}$
Total for 28 years.	88190	5659	1 in $15\frac{3105}{5659}$
1832¼	3991	290	1 in $13\frac{229}{219}$
Total for 9years.	92181	5949	1 In $15\frac{2946}{5949}$
1833¼	3332	293	1 in $11\frac{100}{703}$
Total for 30 years.	95513	6242	1 in $15\frac{1983}{6242}$
1834¼	4524	422	1 in $10\frac{304}{422}$
Total for 31 years.	100037	6664	1 in $15\frac{77}{6664}$

Comparing the average mortality in each of the years, noted in the above table, with that which occurred previously, the result is very remarkable, especially in those periods when restriction on the admission of the malignant forms of the epidemic already referred to, were less rigidly enforced. On the other hand comparing this with statistical tables for the last 15 years, it appears that the mortality in 1823, 24, 25, 26, and 27, when pestilence raged with characters, in many respects resembling those in the last 4 years, it was very nearly the same. An additional array of facts to illustrate this subject may be seen in the pamphlet I published at the close of 1831, to which I beg particularly to refer. There is also a memorial connected with that pamphlet which I presented in 1835, first to the King and Queen's College of Physicians in Ireland, and subsequently to the Irish government, praying adjudication of the former, and an impartial investigation, of the latter, it aims not less to promote public security, than to obtain that justice which is the birth-right of every man.

An abridged case from the medical reports of the years 1832, and 33, and there given as specimens of cholera morbus epidemic in those years, will assist, I hope, to settle this important, and to me anxious question,. Though panic may have lost some of those features which was excited universally at the time I first

proposed to reduce it to its just proportions; yet the cause must be still deemed deeply interesting, if the average mortality in hospitals in the past and present year, and the frequency of sudden deaths amongst all grades of society during that period be considered, with a view to the future, as regards either prevention or cure.

Case of Epidemic Cholera, No. 1.: *(See Medical Report for* 1832, *P.* 18.*)*

Bridget Kerwan, aged 60.---Seized April 10, 1832, at two o'clock a. m. with severe vomiting and purging. At 5 o'clock p.m. countenance collapsed and pale generally; eyes sunk; a livid circle round them; cheeks naturally florid, inclining to blue colour: no pulse at the wrist; feeble in the carotid arteries; extremities quite cold and livid; voice nearly extinct; body cold; hands and feet shrunk; the discharge from the stomach dark-coloured and muddy, with a tinge of white; no urine passed for six hours; feet and legs affected with painful spasms. This train of symptoms, being seen by the author of the report in question, he announced the case to be epidemic cholera. By friction dry heat to the extremities, large sinapisms to the centre of the body, both before and behind. and two grains of calomel, and quarter of a grain of opium, given every half-hour, with a spoonful of a stimulant mixture of compound spirit cardamons and aromatic spirit of ammonia, the pulse and voice were restored, the vomiting and purging were checked, and the lividity of countenance disappeared the same evening. The patient was able to sit up in bed on the succeeding morning: she and her friends ridiculed the alarm of its being a case of cholera. The patient, however, relapsed on the next day, and died that night. This case the most urgent, is given as an index to those denominated cholera in the reports by Drs. O'Brien and O'Reardon, in 1832 and 33. But the identity in essentials with cases I reported in my comparative view in January 1832, of those I prescribed for in the New-street Cholera Hospital and of those reported from the largest one by the Physicians and in those I saw, September 1834, in the Tenter House Cholera Hospital, was unquestionably manifest.

It is to be remembered that the calamitous period of 1798 was one of such occurrences, as, in the succeeding years, through famine and the sufferings of the poor, to confirm the foregoing indications of the generating sources of disease.

Having, during a professional course of close inspection for forty years, observed the injurious want of Medical Statistics, or even of bills of mortality in the Irish metropolis, I lent my aid to the commissioners appointed by government to inquire into this subject, and while I was physician to the Cork-street Fever Hospital and House of

Recovery, my annual reports supplied the want as related to that Institution. The failure of the Cork-street Fever Hospital to meet the purposes for which it was calculated, contrary to the ardent expectations of success which I entertained on my first connection with that Institution, was owing to the causes which I repeatedly, but in vain, stated to the managing Committee and to the Members of the Irish Government such means to be wholly beyond the controul of the managers. The true cause was the utter destitution of the poor, always followed by disease, and notwithstanding, the general and very great increase in the population of Ireland, it will appear, by comparing Dr. Whitelaw's census in 1798 (already referred to) with that of 1835, taken by order of government, that the population of St. Catherin's Parish decreased 2,500 souls, and that of Luke's 636. This depopulation is proved to have proceeded from the causes I have stated, and I have been supported in my opinions by the Medical reports from the rural districts.

There are many Fever institutions in Dublin, established since the primitive one of 1803 : all were erected with the view of checking the rise and growth of epidemic diseases, but they were multiplied in compliance with an opinion, (I think fallacious) that such diseases depend chiefly or wholly on contagion. They appear to me, therefore, to have been quite unnecessarily extended, especially during alarming influxes on the usual current of disease; which opinion I maintained in my evidence before the Commissioners of Poor-laws Inquiry, and has been fully borne out by the Medical reports associated with their proceedings.

In ordinary times it is however, certain, that legitimate cases could not be found to occupy a sixth of the beds, and they must have remained vacant had not these hospitals been made asylums for the houseless and famishing poor, and for those labouring under diseases, often the consequence of misery alone, such as low fevers, dropsy, melancholy, and even mania. In three years, 1832-33 and 34, I know that many beds in the Cork-street hospital, not occupied in the manner just adverted to, had been kept empty, wholly in compliance with the opinions of the ultra-contagionists.

An experience of nearly forty years, as student and physician, in dispensary and fever hospital practice, enables me, without hesitation, to give it as my opinion, that the formation of medical districts, to each of which a fever hospital, dispensary, poor-loan fund, cowpock institution, with surgical beds to the number of six in each, would be a very great improvement; and I have no doubt that under such an arrangement, one fever hospital on each side of the Liffey, with a soup-shop in each parish, would be found sufficient for the poor of Dublin during even fierce outbreaks of epidemic disseases; and that after these extraordinary swells subside, the bedsteads in hospital, whether surgical or medical, might be most advantageously occupied by those labouring under parturition, accidents, or chronic

disease; or, if dissengaged accommodation should still remain, by the houseless and unemployed tradesman, predisposed by want to mental and bodily disease. As physician to the chief dispensaries of Dublin at the close of the last, and beginning of this century; to the Cork-street Hospital from its foundation until July last, and as one of the officers of Health in St. Peter's parish duing the prevalence of the epidemic of 1817, 18, and 19, I have collected facts on this subject, from which alone these statements have been made.*

Having already, in comparing the relative agency of destitution, malaria, and contagion in the rise and growth of disease in Ireland since the beginning of this century, chiefly supplied what is omitted in the printed report by the commissioners, I shall now, referring generally to my sketch of Epidemics, and to that report, recapitulate from the former of these publications, my statements with respect to the effects of contagion on the Medical officers of the Cork-street hospital, and their longevity, and thus show I did not state, as the latter does, that the physicians of that fever hospital were attacked by fever, subsequent to 1823, but the contrary, viz.

The three physicians, and the surgeon first elected to the Cork-street fever hospital, are all still living, except Dr. Mills, who died of a chronic disease long after he had resigned his office in that Institution, and which he did not hold more than two years; Dr. Barker was attached to the hospital from its beginning, for twenty years; Dr. Abraham Colles was surgeon, about three years; and myself, thirty-one years. All the medical officers so attached, or subsequently added to the Cork-street fever hospital, *before* 1823, were attacked more or less severely after the comencement of their duties there. or their attendance at the houses of the sick-poor. It was in this way that Dr. Lee and Dr. Lynch contracted the malignant typhoid disease, of which both died a few weeks after their election; they were the only physicians in the Cork-street fever hospital who died of disease so contracted. Dr. George Hagan died, I think, of a chronic disease, the result of long-continued exertion, it being aggravated by the baneful influence of a contagious atmosphere in the dwellings of the sick-poor. It is moreover very remarkable, and a fact highly instructive on the subject of contagion, that none of the junior physicians have been attacked with the prevailing disease since the unprecedented revolution towards malignity, which occurred in 1823. And, though many have been added, and some of them been transferred to Cholera hospitals since 1832, I have heard of none of them being attacked with symptomsof that epidemic.

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* See the printed Reports of the Poor-law Commissioners.

The following Table shews the state of the Cork-street Fever Hospital in respect to the admission, and mortality of Patients, during the periods therein stated, viz : 1834-5 and 6,

	From 1st. April, 1834 To 31st. March, 1835.			From 1st. April, 1835 To 31st. March, 1836.			From 1st. March 1836 To 30th Nov. 1836.		
	Admitted	Discharged	Died	Admitted	Discharged	Died	Admitted	Discharged	Died
April	370	339	32	375	353	35	400	349	50
May	306	286	35	361	357	42	415	400	37
June	284	268	34	344	330	37	407	386	28
July	261	268	23	359	336	23	431	403	42
August	311	346	29	391	382	24	396	329	34
September	301	235	29	261	230	28	402	390	32
October	356	327	27	321	294	30	493	390	46
November	402	358	28	378	321	31	550	498	54
December	470	381	39	455	350	53			
January	422	367	53	480	434	53			
February	404	445	35	548	444	47			
March	537	434	48	489	514	34			
	4524	4045	422	4672	4235	444			

See Appendix, (Note D,)

The foregoing Table must conclude this section of reference, to my evidence in my Annual Medical Reports, and many memorials for investigation, since 1830, as well to the successive chief governors of Ireland as in my testimony before the medical committee of the House of Commons, in August, 1834, and in my evidence to the Poor-law Commissioners, and in my petition to Parliament, June, 1836. On all these occasions, I urged the necessity of investigation for public security. At the first of these periods, my leading object in seeking investigation of the nature of the prevailing epidemic, (as may be seen in my Comparative View then published,) was to shew how far experience in the treatment during previous revolutions might assist in the adaptation of preventive and remedial measures, especially in the fever hospitals, to the threatened increase which excited intense panic, and, as has since been proved, unnecessarily produced great embarrassment in all the domestic and commercial relations of this country. At the second period, August, 1834, when the same epidemic threatened another fierce out-break, I sought investigation with the

same aim; but in the last, namely, May, 1836, when the concurrence of moral and physical causes contributed to unite the malignity of all preceding epidemics, and produce a degree of mortality, previously unknown, even in Ireland, (See my petition to parliament, presented by Mr. French, member for Roscommon,) my efforts for investigation were equally fruitless, farther than as I learned from the subsequent debates, on the miscellaneous estimates, my petition was referred by the House of Commons of Ireland, to a medical committee. The facts adduced, even in this little treatise, I hope, will afford some aid in an enquiry of such vital importance. And should those sources of information I have adverted to, be laid open, namely, the annals of the Cork-street fever hospital, and the answers to my queries on medical statistics in the rural districts, furnished to the Poor-law commissioners, I have no doubt of being able to supply an additional array of facts of great value on the pending questions of Poor-laws, or of medical reform for Ireland, whether estimated by the zeal with which, I hope, philanthropists are preparing to enter upon that enquiry, or even in the abstract calculations of political economists, who may entertain it with different views.

SECTION, II.

I now proceed to the other department of Enquiry, namely, the promotion of a sounder Pathology than can be produced by either of the exclusive systems of humorolism formerly, or solidism latterly in vogue, which, I was first prompted to enter upon from observing that our epidemic fevers have become yearly more pestilential, and since by the connection between morbid changes in the blood, on the one hand, and derangement and debility of the functions of life on the other, which led to the paramount practical question, were these synchronous phenomena palpably accidental in their junction, or actually ancillary in their rise and progress? A question becoming more and more interesting, as disease has more and more baffled successive systems, and the fitness of what remains of the *debris* can now be estimated in establishing a perfect one.

Proud to acknowledge the aid which my former attempts similarly and arduously directed, met with on the Continent, (especially in a critique by Dr. Steinhem, in the Magazine of German Litera-ture, and in Great Britain, I made extracts with that view, as well as in justification of my attempt, and I prefixed it to mysketch of epidemic fevers in Ireland. But as all I have seen and read since that was published, has tended further to confirm those observations which it contained on the connection between physiology and pathology, I am desirous to prefix the testimony of some of my most distin-

guished countrymen, in support of the additional evidence I have here to adduce, more especially as the opposition I have met with has been chiefly of late, in the otherwise eminent schools of anatomy and surgery of Ireland; and I hope now for a more favourable opinion, since the disciples of John Hunter, in the Windmill-street school, now acknowledged that the idea of solidism arose, rather in conformity to their unrivalled success in adding to morbid anatomy, than to the discoveries of the vital properties of the blood, made by their distinguished leader.

Kildare-place, July 24, 1828.

My dear Sir,

In reading the publication you were so good as to send to me, I have noted in the lower margin, some detached observations which have occurred to me.

The existence of iron in healthy blood appears to be well ascertained; also of sulphur, calcareous earth, and of different saline substances, or at least, of their constituent principles. Good. vol ii. pp. 30, 32; 2d edition.

Now, if iron, sulphur, and salts, applied externally, excite vascular action, is it not probable that the blood stimulates the vessels through which it circulates, more or less, according to the proportion of these principles which it contains; and is not this conclusion rendered more than probable by the effect of chalybeates in chlorosis, and of sulphureous waters in cutaneous affections?

But again—we know that blood may be infected in the living animal with various extraneous bodies; the volatile matter of asparagus* and turpentine, the coloring matter of madder, by emetic tartar and mercury. Some of these appear to stimulate the vascular system, partially or generally, and by producing an increased action, short of inflammation, to contribute to the removal of chronic diseases, particularly by increasing the perspiratory discharge. Such, also, seems in some cases to be the effect of a generous regimen. But when the operation of any of these stimuli exceeds the healthy limit, inflammation, partial or general is produced; and this is to be removed, not only by diminishing the action of the vessels, but by removing the irritating cause. When inflammation attends the puncture of a thorn which remains in the wound, antiphlogistic means are with propriety employed, but the main point is the extraction of the thorn.

This reasoning may be applied to febrile diseases in general, if we take into account that they are often, perhaps generally, produced by indirect stimuli. Their first effect is to diminish the exertion of vital power, and thus to cause an accumulation of vital energy, which often breaks out in inflammatory action, necessary perhaps for the removal of the morbid cause; but in sthenic habits, exceeding the due limit, and requiring to be moderated. In this point of view, we might consider fevers as a depuratory process, in which the powers of life are gradually, and according to a certain law of periodical movement, excited to the expulsion of the offending matter. This brings us back to the *concoction* of our forefathers, whose doctrine, but especially whose practice, thoguh I should be considered as a dotard, I cannot reprobate.

I am, my dear Sir,

Very sincerely yours,

R. PERCEVAL.

To Doctor Stoker, M.D.
21, York-street.

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* Dict. des Sciences Medicales, Art. Sang.

Rutland-square, Dec. 18, 1829.

My dear Stoker,

I have read your Pathological Observations with much interest, and great instruction. You have sufficiently proved that exclusive solidism would be as weak as exclusive humorolism; indeed it is not likely that the solids which are functional parts, can be long out of order without affecting the fluids, and *vice versa.*

If a man is in the habit of taking in articles of diet unfit to replenish the waste that is going on, the fluids must be in the first instance affected, and afterwards the solids. If the digestive powers, the laboratory for the preparation of the blood, are incapable of performing *their* functions in a healthy manner, a bad chyme is prepared, and the same occurrence takes place; hence those numerous maladies which Abernethy has described in his Work which treats of the constitutional origin of local disease; hence, scrofula, too, and a multitude of cutaneous complaints. Contagion received into the lungs must first act on the fluids, if in the skin, so as to cause ulceration, it then acts first on the solids, but on the fluids afterwards.

Believe me to be, truly yours,
RICHARD CARMICHAEL.

To Dr. Stoker, M.D.
21, York-st.

November 18, 1835.

My dear Sir,

I am much obliged by your kindness in sending your admirable Report of Epidemics, which I have laid before the profession in this and other countries. I this day received another copy, which I highly prize; and three, which I shall forward according to your directions.

I consider this Report one of the most valuable productions that has hitherto issued from the Dublin Press; and, I am confident it will be quoted as authority, when many of your puny rivals will have gone to the tomb of all the Capulets.

Fevers are too common in our native country, as you have shewn, from famine, poverty, and epidemic influences; and there is no physician in Ireland or elsewhere, who has seen so much of the different forms of the disease as yourself. It is this that induces me to place your Reports before the Medical world.

Believe me to be, dear Sir,
Yours, faithfully,
M. RYAN.

To Dr. Stoker,
21, York-st.

The additional aid afforded Dr, Alison's recently published Supplement to the Outlines of Physiology and Pathology is another motive to solicit an opportunity for explaining the principles and practice I ventured to recommend in my last previous publications.* Feeling, however, very sensibly how much I need the kind indulgence of my readers, I beg to premise that I was first necessarily led by my professional engagements into the hazardous and difficult position I hold; and believing that a portion of truth of great

* Supplement to Outlines of Physiology and Pathology, by W. P. Alison, M. D., &c. &c. London, 1836.

value in medical science, and therefore highly important, was then entrusted to me, I deemed it inexcusable from any personal apprehensions to abandon it. Moreover as its assailants were generally enlisted from the opposed ranks of exclusive fluidism and exclusive solidism, I was better able to keep my station; for however, dangerous their weapons might be to each other, they did not materialla affect those occupying the debatable ground. And truth, which has prevailed almost every where* else, must be ultimately acknowledged here also, notwithstanding the opposition, as will subsequently appear, it had hitherto encountered.†

Soon after I turned from my attendance in the the lecture-room, and the mere study of books to the bedside of the sick, it was with painful humiliation that I found in the wide and crowded scene of human suffering then presented to me, so very little acknowledgment of theoretical systems which I had so ardently admired; nor was it long before I felt myself obliged to announce publicly that the systems and institutes of medicine then in vogue, based as they were, some on different, others on totally opposed principles, in most of the European colleges, appeared to me on that account to rest on insufficient foundations, and to be supported rather by the genius of their advocates, and the authority of great names, than either by their utility or their truth.

Though it must be admitted that the increase of positive knowledge since that time has given many valuable additions and repairs to those exclusive systems, even yet every experienced physician must admit that practice finds them frequently at fault, or directly contradicted by results. When first I ventured, at the close of the last, and beginning of the present century. to publish my objections to their exclusive principle, the announcement was received with as much dissatisfaction at the opinion of so humbl ae person ean be supposed to have produced; for as I saw no ground for rejecting any system to the exclusion of the other, I have been accordingly assailed as an enemy to each. Increased experience has only more deeply convinced me of the deficiencies of these several systems, and induced me to urge them again and again upon the consideration of my medical brethren. My humble efforts soon attracted much favourable notice from many eminent writers in France, Germany and America; and those considerations which had so long ago and so often since suggested as necessrry to a sound system of pathology, have been insisted upon in language which, though better is not very dissimilar to mine not only by some of the most able and popular of the medical text writers of Great Britain, but also in the present year by most of the London medical

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* London Med. and Surg. Jaurnal, pp. 776—782, 202. &c. (March, 1836.)

† Notices of Communications to the British Association for the Advancement of science at Dublin, in August 1835.

journals, as well in their editoral reports as in the proceedings of several medical Societies connected with the London University and other distuinguished schools of medicine and surgery,*

My leading object, however on the present occasion, being to avail myself of the irrefragable evidence I find in Dr. Alison's recent work of the Laws and Conditions of Vital Action, I hope to be permitted to make a few preliminary remarks in this place on the economy of the animal system, or, in other words, respecting the nature of animal life. By the term "animal life," I mean (wishing to avoid questions rather metaphysical than medical), to express the life of the body as contra distinguished from the immortal soul; for although our limited faculties have as yet been, and probably will on earth ever continue to be, unable to discover the nature of either the one or the other; yet they are not only distinct but distinguishable from each other, as we may frequently witness the life of the body, after the intelligent and responsible soul appears to have withdrawn, and as frequently, on the other hand, the greater portion of the body dead, while the immortal spirit continues to abide there.†

Cases of simple or uncombined typhus must be familiar to every experienced physician, when sensorial power is suspended during many hours, or even days of violent agitation, perhaps of convulsion of the vital and natural functions; yet which is sometimes restored shortly before death in a wonderful manner. In the malignant cholera, on the other hand, that combination I believe, of epidemic typhus with cholera, as is well known to all acquainted with that dreadful epidemic, there is generally complete integrity of sensorial power during almost the total annihilation of the vital, natural, and sometimes even of many of the animal functions, as dististinguished by Bichat and others. But attempts to localize it have been as vain, and I think more detrimental to medical theory, than even those to ascertain the essential nature of animal life. Thus, one class proposing to confine the vital principle wholly to the solid machinery of the body, gave rise to that system called solidism, and was long maintained by the ingenuity of Hoffman, Baglivi, Cullen, and their numerous disciples. Another sect limited it as exclusively to the blood, and the fluids derived from it, and hence originated the system called fluidism. which was maintained not, however, with the same zeal; for, though the great discovery of the circulation by Harvey in the 17th century directed pathologists to the circulating mass and sanguiferous system, still the eclectic school of Boerhaave was in some measure founded on it, and continued until the anatomical sect at the Windmill-street School, by

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* See Lond. Med. and Surg. Journ., Nos. 25, and 26, Jan. 16, & 23d. 1836.

† See Paper by Sir Henry Halford on the Causos of Aritæus in the Transactions of the College of Physicians, where the above subject is luminously treated.

the illustrious Hunters, and their pupils attempted though on facts opposed to J. Hunter's observations on the laws and conditions of vital action, to found pathology almost wholly on *post mortem* observations. So that by each sect the phenomena of disease were referred to the morbid actions in different parts: and of course their respective systems of practice differed as much as their ideas of the cases which they respectively advocated. The mischief, however, would have been much greater, had not exclusive humouralists, as well as exclusive solidists, been often obliged to give up their theory to cure their patients: and tacitly to exchange their boasted dogmatism for the empiricism they openly impugned.

By the application of those first principles, derived from the study of the functions in genral, and the laws of the vital system, the *errors* of those exclusive systems have become more apparent, and the modes of restoring them, or at least of extending their utility, have thus also been more clearly pointed out. Dr. Alison's Outlines of Physiology and Pathology, published in 1833, appearing to me to be highly valuable in this way, I directed the attention of those attending my lectures on the practice of physic, to the illustrations thus afforded of the nosology I recommended for their adoption. The following passages will assist to explain the objects of some others I shall quote from the supplement published at the commencement of that year.

"It is not presuming too much," Dr. Alison observes in his preface, pages viii, ix, "on the accuracy of the information which we now possess on these subjects, to assert that two errors have been very prevalent in general or systematic medical works, since the time that medicine has been separated from other sciences, and cultivated on sound principles. First, the 'moving powers of the animal economy,' and especially the province of the nervous system in producing the phenomena of life, which were long neglected in certain schools of medicine, have been erroniously conceived by others: by Stahl, by Hoffman, by Cullen, and by Whytt, and to a certain degree by Bichat, Legalois, and even by Dr. Wilson Philip; and were more accurately understood by Haller than by any of those authors." Secondly, "Besides the misconceptions which seem to have prevailed, and still continue to prevail amongst many Physiologists, as to the essential condition of vital movements, and particularly as to the influence of the nervous system in determining these movements and their immediate effects, it seems now pretty generally admitted that the influence of the truly vital properties of the blood, and other animal fluids, on many of the most important changes of the living body, in health and disease, has, until lately, been very much overlooked. When these vital properties of the fluids have been ascertained, and their importance duly appreciated, there is every reason to believe that the distinction, so often drawn in the schools of medicine, between solidists and fluidists, will be

effectually obliterated by the admission that most diseases originate in that part of the system (the capillary or vessels) where the animal solids and fluids are most intimately blended together, and are continually interchanging particles; and, therefore, necessarily extend to both."

The increase of positive knowledge announced in these Outlines of Pathology affords much aid in solving many of the most important questions which naturally suggest themselves to pathologists: But I shall confine myself to the following—What is disease, which often oppresses us through life, and at last brings death in its gloomy train? We feel the langour or the pain, and when the grim tyrant has prevailed, and the spirit has returned to Him who gave it, anatomic skill can accurately shew the ravages in the forsaken fabric, and sometimes the morbid changes left in the fluids. To learn so much is no trifling advantage, and one for which medicine must be deeply indebted to *post mortem* anatomy; but still, to look upon the destruction thus exposed, can only make us feel a more intense interest in the enquiry; How was this destruction effected, or how it commenced and progressed? I do not deny that *post mortem* anatomy, and its brightest pendent, stethoscopy, can demonstrate the progress of disease in one portion of the system; it can shew the incipient tubercle as well as the noisome cavity which it afterwards becomes. But the cavity was not more a consequence of the tubercle, than the tubercle is itself a consequence of the disease, which must have existed before the tubercle was discoverable; and we have still to enquire after the cause which first produced the little spot, and then widened it into the fearful track of death. Such a gradation of disease, in its transition from the fluids to the solids, might be illustrated by numerous preparations in every anatomical museum; some of them I have myself had the satisfaction of placing in the Museum of the college of Surgeons, and cases and dissections, both of human subjects and horses, which I detailed with the same view, may be found in the 67th to the 104th page of the 3rd part of my "Pathological Observations," also in the 243rd and following pages, "Cases of organic disease, namely, enlargement of the heart, hepatization of the lungs, and hydatid tumours, which were traced from morbid changes in the globules in the blood in the buffy coat, or that drawn in the course of disease, and on that found effused after death, until ceasing to have the distinguishing properties of a fluid, after it concreted into the several forms of organic disease."

I therefore say, without the least doubt of its truth, but with diffidence and unfeigned respect for the distinguished men whom the exclusive pathology of the solids has ranked among its approvers in modern times, that solidism, as an exclusive system, owes its existence to insufficient distinction between cause and effect; or, as causes, so far as we know them, are but events uniformly followed by the same sequences, and as each sequence in its turn becomes

the cause of another sequence, I shall express myself more correctly by saying, that exclusive solidism owes its existence to the difficulty of tracing out the whole concatenation, and to the mistake so fatal to sound pathology, since the close of the last, and commencement of the present century, of assuming as the first event, one which, though connected in the chain, is separated from the first by many links. Nor do I doubt that it has received much support from the still greater error of regarding an event as one of a series to which it was only incidental, or, as frequently happens, with which it had no relation whatever. The distinctness with which anatomy, which must be regarded as the patron of modern solidism, can trace back the progress of disease in the solids, sometimes to a point, seems to have induced the inquirer, in his zeal, first to take it for granted that this was the salient point of the disease, and next to confound that with the disease itself, and then with the cause of the disease; and, finally, as the solids only would admit of this species of investigation, to suppose that in the solids vital power exclusively abides, and disease is universally generated.

That disease may be generated in the solids has, I believe, never been denied, but what I contend for is, that morbid alterations are not confined wholly to them, but arise in the blood, whether from the introduction of extraneous fluids, or such as are not assimilated to it; also by interruption of the functions of sanguification in the liver and lungs, by moral causes, e.g. fear, anger, &c., and by physical, e.g. vegetable, mineral, atmospheric miasms, or other poisons; hence that the salient point of actual disease is most frequently in the fluids. Conversant, however, as anatomy is with the effects only, and comparatively ignorant as we were, until late discoveries by the microscope, of the laws and conditions of vital actions in the fluids, it was impossible to lay down any rule with certainty, or to do more than assist reason by observation and experience. Than that the blood, drawn in the different stages of disease, exhibits appearances totally different from that in health, there is, I think, nothing more certain; that it may be affected, also in different species of disease in very different degrees, I have often demonstrated to my pupils, when shewing them cases of symptomatic and idiopathic fever, and recommended these facts as the basis of sound pathology, and pointed out to them how much those various appearances of the blood might assist not only as a diagnosis between such fevers, the blood being loosely coagulated and broken into fragments in the former, and firmly coagulated in the latter type; but likewise, that the differences between the latter appearances of the blood, might also assist in distinguishing between the various functions and organs affected in different cavities engaged. These facts always appeared to me to be too striking and indisputable to be properly overlooked, and necessarily to suggest inferences of vast importance to the practical physician, either as to the *ratio symptomatum* of disease, or the *modus agendi* of causes.

To neither of the hostile or contradictory systems of exclusive solidism, or exclusive humoralism, as respectively promulgated by the schools of London, Edinburgh, and Montpelier, and their rival contemporaries in Germany, do I belong. As exclusive systems, I believe them to be extremes, and equally distant from sound principle. In a course of observations on the rise and growth of epidemic and pestilential disease, longer than falls to the lot of most men, I have over and over again tried their respective efficacy, for aiding a knowledge, either the *ratio symptomatum*, or *methodus medendi*, and have found them fail. In remarking on the differences of these rival systems, however, I am bound to add, that whilst each has its peculiar advantages and defects, that of solidism is most defective at the commencement of disease, when, if it could afford aid, it is most required. In support of this opinion, the history of diseases in general affords numerous arguments. In dynamic or inflammatory dropsy, with coagulable urine, and disorganized liver, the buffy coat on the blood drawn in the course of disease, which I have generally found to precede such antipenult changes in the system, I have also found most useful in guiding the prognosis, and in the application of remedies. In diabetes, also, in which the urine is saccharine; though there is generally disorganization of one or other kidney detected after death, yet I have generally found the white sizey surface on the blood drawn indicative of imperfect chylification, likewise to be the earliest indication of disease, and hence, the surest guide to a remedy for it. In hypertrophy of the heart, hydatids, and several other organic diseases already adverted to, the detection of the early changes in the condition of the blood appear to me to be of the utmost importance in guiding the treatment of these diseases; but I have already referred to the cases I reported in my Pathological Observations, to illustrate that opinion.

With respect to modern solidism, I have, in stating my objections to it, to add, that in the very chairs in which it was first inculcated, its authority as an exclusive system it is altogether denied.

The sequel of this Treatise, as well as the Appendix, is now unavoidably postponed; a letter from my Printer having this morning stated, that from the pressure of business at the close of the year, he cannot proceed further than forty-eight pages, for which he contracted. I hope, however, to resume the subject early in the next year, and, in the mean time, to add to the materials with which I have been liberally furnished by my Medical brethren in Great Britain and Ireland. The succeeding as well as this Part, will be supplemental to my sketch of Epidemics in Ireland, published at the close of the year, 1835.

York-st. Dec. 23, 1836.